Section 7 - West Colorado River Basin
Regulation/Institutional Considerations

Section 7
West Colorado River Basin - Utah State Water Plan

Regulation/Institutional Considerations

7.1 Introduction [17]

This section presents a brief discussion of several regulations now in place to protect and manage the water resources of the West Colorado River Basin. It also discusses the major related problems and needs.

The Department of Environmental Quality and the Division of Water Rights are the state agencies primarily responsible for water regulation. Water quality is regulated by the Division of Water Quality and the Division of Drinking Water within the Department of Environmental Quality. These agencies operate in accordance with the Utah Water Quality Act and the Utah Safe Drinking Water Act. Water quality is also regulated by various federal controls. The Division of Water Rights, Department of Natural Resources, is responsible for water allocation and distribution according to state water law. The detailed functions of these agencies are described in the *Utah State Water Plan (1990)*, Sections 7, 11 and 12. The Division of Water Resources regulates the cloud seeding program as described in Section 9, and is responsible for state water planning and assists with water development.

7.2 Setting

Water regulation is generally carried out under the direction of state agencies, although some federal agencies become involved when it includes their mandates. Local public and private institutions and entities usually manage and operate the various water systems at the basin level.

Consideration of water rights, water quality and the environment are prerequisite to the management of the water resources. Regulations are required to avoid or resolve conflicts as they arise and for protection of the water user.

7.2.1 Current Regulation

Water law, based on the doctrine of prior appropriation, is administered by the Utah State Engineer. The Division of Water Rights has a regional engineer in Price who carries out the day-to-day activities for Carbon, Emery and the portions of Utah, Duchesne, Wasatch, Sanpete and Sevier counties; another in Richfield for Wayne and the portions of Sevier, Piute and Garfield counties in the Dirty Devil River drainage basin; and another in Cedar City for the portions of Garfield and Kane counties in the Escalante and Paria river drainages (see Figure 7-1).

River commissioners were created in response to a petition to the court or state engineer. These commissioners are administered by the Division of Water Rights. An appointed "river commissioner" is charged with distribution and/or measurement of surface and/or underground waters. Assessments are made to pay the commissioner and for other costs. Members in each system elect a board that represents them and conducts business as required. In this basin, there are four appointed river

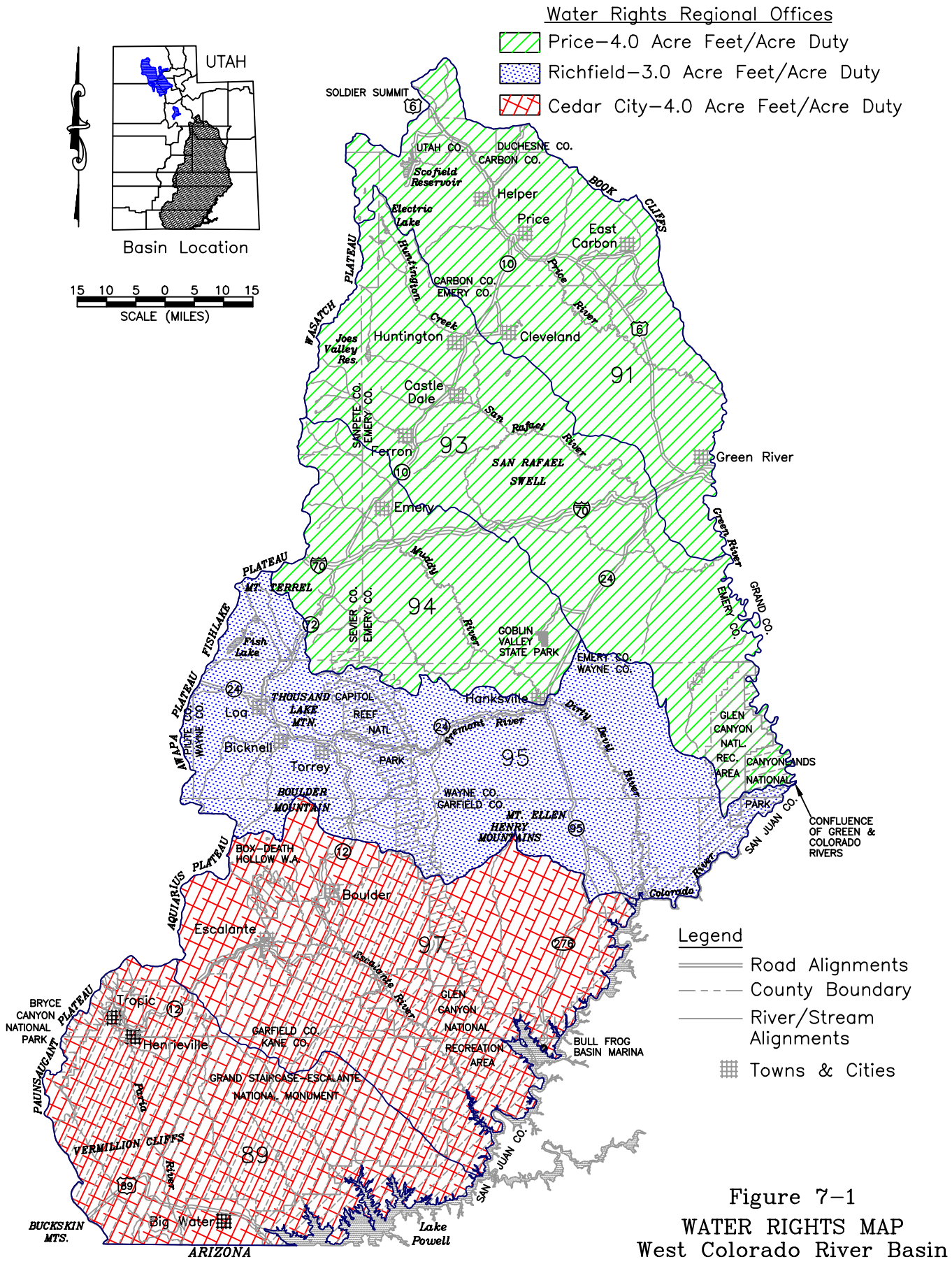

Figure 7-1
WATER RIGHTS MAP
West Colorado River Basin

commissioners on the Price, Huntington, Cottonwood creeks and Fremont river systems.

The quality of water is determined under standards for allowable contaminant levels according to the use designations. These designations and the standards are published by the Utah Department of Environmental Quality in the *Standards of Quality for Waters of the State*. The Utah Water Quality Board implements the regulations, policies and activities necessary to control water quality. These are carried out by the staff of the Division of Water Quality.

The Utah Drinking Water Board is responsible for assuring a safe water supply for domestic culinary uses. It regulates any system defined as a public water supply whether publicly or privately owned. The Drinking Water Board has adopted *State of Utah Rules for Public Drinking Water Systems*, including the Source Protection Program to help assure pure drinking water. This includes monitoring delivered drinking water quality as well as water source protection. These responsibilities are carried out by the staff of the Division of Drinking Water.

7.2.2 Existing Local Water Institutions and Organizations [54, 61]

Local organizations generally carry out the distribution of water in accordance with water rights and rules and regulations administered by the State Engineer. These local institutions, entities and organizations have also completed most of the water development in Utah. Distribution systems along with local entities formed under specific enabling legislation are described below.

Water Conservancy Districts - These are created under Title 17A-2-1401 of the *Utah Code Annotated*. They are established by the district court in response to a formal petition and are governed by a board of directors appointed by the county commission when the district consists of a single county. Directors for multi-county districts are appointed by the governor. Water conservancy districts have very broad powers which include constructing and operating water systems, levying taxes and contracting with government entities. These districts include incorporated and unincorporated areas. There are six districts in the basin: Carbon County and Emery Water Conservancy districts include most of Carbon and Emery counties; Wayne County Water Conservancy District includes the Upper Fremont River drainage, Kane County Water Conservancy District includes Kane County, Upper Sevier Water Conservancy District includes Tropic and Cannonville in Garfield County, and the Wide Hollow Water Conservancy District includes the lands irrigated by the New Escalante Irrigation company in Garfield County.

Mutual Irrigation Companies - These are the most common water development and management entities in the basin. They may be either profit or non-profit; most are non-profit. They are generally formed under the state's corporation code. In general, stockholders are granted the right to a quantity of water proportional to the number of shares they hold and assessments are levied similarly. There are 44 mutual irrigation companies in the West Colorado River Basin.

Private Water Companies - Organized as corporations, these include for-profit and non-profit companies (which are regulated by the Public Service Commission). For-profit companies, must provide service on request while the non-profit companies only need to supply shareholders. The basin has 31 water companies.

Special Service Districts - The basin has seven special service districts dealing with water. These districts have many of the same duties and authorities of other districts and can be created by either counties or municipalities. They can be established to provide water, sewer, drainage, flood control and non-water-related service.

City Water Utilities - These are utilities operated by incorporated cities and towns to provide water to residents and subscribers. Municipalities can form corporations to deliver water inside of all or any part of a city boundary. Counties have the same authority in unincorporated areas. The *Utah Code Annotated* and local ordinances provide the legal framework for water system operation. Local entities may pass ordinances regulating water use. There are 14 city water utilities.

Water User Associations - The organizations are groups formed to deliver water for various purposes. They are often informal groups, but they can also be incorporated under Utah law. The Fremont Water Users in Wayne County, New Paria Subdivision in Kane County and Salt Gulch Irrigation Association in Garfield County are examples in the basin of these types of organizations.

Other - The National Park Service delivers culinary and irrigation water to Capitol Reef National Park and the Bullfrog, Hite, Halls Crossing and Dangling Rope marinas in Glen Canyon National Recreation Area. The Division of Parks and Recreation, U.S. Forest Service and the Bureau of Land Management provide culinary water in the state parks, campgrounds and picnic areas. Also, individuals in isolated locations have private wells for domestic water purposes.

7.3 Problems and Needs

Problems are developing in some areas where summer homes are becoming popular. The areas around Scofield and Joes Valley reservoirs are examples, as well as Boulder Mountain. In these areas, potable water is generally obtained by drilling individual wells or maybe one well serving two or three homes. Sewage disposal in these same areas is through the use of septic tanks. In the case of the Boulder Mountain area, there is a chance that these septic fields could affect the Navajo sandstone aquifer. There is a need to provide controls so local wells and future groundwater sources are not contaminated by wastes.

7.4 Water Rights Regulation

The state engineer is responsible for determining whether there is unappropriated water and if additional applications will be granted. This is accomplished through data analysis and consideration of public input.

Before approving an application to appropriate water, the state engineer must find: (1) There is unappropriated water in the proposed source, (2) the proposed use will not impair existing rights, (3) the proposed plan is physically and economically feasible, (4) the applicant has the financial ability to complete the proposed works, and (5) the application was filed in good faith and not for the purpose of speculation or monopoly. The state engineer shall withhold action on or reject an application if it will interfere with a more beneficial use of water or prove detrimental to the public welfare or to natural resources.

Utah water law allows changes in the point of diversion, place of use, and/or nature of use of an existing right. To accomplish such a change, the water user must file a change application with the state engineer. The approval or rejection of a change application depends largely on whether or not the proposed change will impair other vested rights; however, compensation can be made, or conflicting rights may be acquired. Perfected water rights are considered real property. Pending applications and stock in mutual water companies are considered personal property. As such, they can be bought and sold in the open market.

In the appropriation process, the state engineer analyzes the available data and, in most cases, conducts a public meeting to present findings and receive input before adopting a final policy regarding future appropriation and administration of water within an area. Through regulatory authority, the state engineer influences water management by establishing diversion limitations (duty of water, usually 3.0 or 4.0 acre-feet per acre for irrigation in this area, see Figure 7-1) for various uses and by setting policies on water administration for surface water and groundwater supplies.

The Division of Water Rights is responsible for a number of functions which include:
(1) distribution of water in accordance with established water rights, (2) adjudication of water rights under an order of a state district court, (3) approval of plans and specifications for the construction and maintenance of dams and inspection of existing structures for safety, (4) licensing and regulating the activities of water well drillers, (5) regulation of geothermal development, (6) authority to control streamflow and reservoir storage or releases during a flooding emergency, and (7) regulation of stream channel alteration activities.

In addition, the state engineer works with federal agencies on water rights as needed. These situations are handled according to the state water laws.

7.5 Water Quality Control

The discharge of pollutants is regulated by the Utah Water Quality Act (UWQA). The Utah Water Quality Board (UWQB) implements the rules, regulations, policies, and continuing planning processes necessary to prevent, control and abate new or existing water pollution, including surface water and groundwater. This is carried out through the Utah Department of Environmental Quality, Division of Water Quality.

Utah Water Quality Rules developed under authority of *Utah Code Annotated (UCA)* 26-11-1 through 20, 1953, amended, have been implemented by the UWQB under authority of the UWQA. They are described in Section 7 of the *State Water Plan*.

Water quality certification by the state is under Section 401 of the Federal Water Pollution Control Act, 1977, as amended (Clean Water Act, CWA). This act states that any applicant for a federal license or permit to conduct any activity which may result in discharge into waters, and/or adjacent wetlands of the United States, shall provide the licensing or permitting agency a certification from the state in which the discharge originates or will originate. These activities include, but are not limited to, the construction or operation of the discharging facilities. Any discharges will comply with applicable state water quality standards and the applicable provisions of the Clean Water Act.

In addition, Ground Water Protection Regulations were adopted and are now enforced by the UWQB. These regulations are the building blocks for a formal program to protect the present and probable future beneficial uses of groundwater in Utah.

The three main regulatory concepts are: (1) To prohibit the reduction of groundwater quality, (2) prevent groundwater contamination rather than clean up after the fact, and (3) provide protection in all areas based on the different existing groundwater quality. The five significant administrative components are: (1) Groundwater quality standards, (2) groundwater classification, (3) groundwater protection levels, (4) aquifer classification procedures, and (5) groundwater discharge permit system. Statutory authority for the regulations is contained in Chapter 19-5 of the *Utah Code Annotated*, authorizing the Water Quality Board.

These regulations contain a groundwater discharge permitting system which will provide the basic means for controlling activities that may effect groundwater quality. A groundwater discharge permit will be required if, under normal circumstances, there may be a release either directly or indirectly to groundwater. Owners of existing facilities will not be obligated to apply for a groundwater discharge permit immediately. An existing facility is defined as a facility or activity that was in operation or under construction before February 10, 1990. Owners of these facilities should have notified the executive secretary of the UWQB of the nature and location of their discharge.

The regulations contain provisions for a permit by rule for certain facilities or activities. Many operations which pose little or no threat to groundwater quality or are already adequately regulated by other agencies are automatically extended a permit and need not go through the formal permitting requirements. Therefore, facilities qualifying according to the provisions of Section R448-6-6.2 will administratively be extended a groundwater discharge permit (Permit by Rule). These operations, however, are not exempt from the applicable class TDS limits or groundwater quality standards.

The authority for CWA, Section 401 certification, commonly known as 401 Water Quality Certification, is delegated to and implemented administratively through the Utah Water Quality Board by the Division of Water Quality. The Clean Water Act provides the focus for and the delegation of responsibility and authority to the U.S. Environmental Protection agency (EPA) to develop and implement its provisions. Whether or not EPA administers a CWA program directly within a state or indirectly by delegation to a state, the EPA retains the oversight role necessary to

insure compliance with all rules, regulations and policies.

Local communities may want to set up and carry out a local aquifer protection management plan. If so, they can contact the Division of Water Quality for information.

7.6 Drinking Water Regulation

The Utah Drinking Water Board is empowered to adopt and enforce rules establishing standards prescribing maximum contaminant levels in public water systems. This authority is given by Title 26, Chapter 12, Section 5 of the *Utah Code Annotated, 1953(5)*. The rules and regulations setting drinking water standards were adopted after public hearings. These standards govern bacteriologic quality, inorganic chemical quality, radiologic quality, organic chemical quality and turbidity. Standards are also set for monitoring frequency and procedures.

The Utah Drinking Water Board, through the Division of Drinking Water, also operates under the federal Safe Drinking Water Act. This act sets federal drinking water standards and regulations. The Safe Drinking Water Act was recently re-authorized. The intent of the Safe Drinking Water Act (SDWA) is to encourage the state, local governments and water companies to be proactive, to ensure all water systems are capable of maintaining and protecting the supply of safe drinking water at an affordable cost. To accomplish this, a working partnership must be formed between the Division of Drinking Water, local health departments, Rural Water Association of Utah, American Water Works Association, private engineering firms, county planners and the water suppliers.

7.7 Dam Safety [20]

All dams that impound over 20 acre-feet of water are assigned a hazard rating. Dams impounding less than 20 acre-feet may be ruled exempt if they do not constitute a threat to human life or property. Hazard ratings reflect either high, moderate or low damage potential if the dam failed. It does not reflect the condition or reliability of the dam but rather the potential for loss of life or property damage in the event the dam were to fail. This determines the frequency of inspection. High-, moderate- and low-hazard dams are inspected every one, two and five years, respectively.

Following the inspection, a letter from the state engineer suggests maintenance needs and requests specific repairs. The state engineer can declare the dam unsafe and order it drained and even breached after drainage. Efforts are always made to work with dam owners to schedule necessary repairs.

The state engineer has outlined design standards in a publication entitled, *State of Utah Statutes and Administration Rules for Dam Safety*. Plans and specifications must be consistent with these standards. Dam safety personnel monitor dam construction to insure compliance with plans, specifications and design reports. Any problems are resolved before final approval.

The state engineer is currently assessing the ability of all high-hazard dams to meet minimum safety requirements. The assessment includes seismic stability and the dam's capability to pass the appropriate Inflow Design Flood (IDF). Table 7-1 shows the dams classified as high-hazard in the West Colorado River. The Division of Water Rights rates federal dams, but these are exempt from requirements of the State Dam Safety Program. The Bureau of Reclamation inspects dams constructed under its programs.

7.8 Policy Issues and Recommendations

One issue dealing with coal mines in Carbon and Emery counties is presented.

7.8.1 Mining Problems in Carbon and Emery Counties

Issue - Coal mining operators intercepting underground water may affect local water entities' supplies.

Discussion - Numerous underground coal mines operate in Emery and Carbon counties, providing a solid economic base for the areas and also generating much needed coal for industries on a local, national and international scale. Some of the water encountered by mining is utilized by mining

Table 7-1
High Hazard Dams

Name	Owner	Year Completed or Modified	Height (ft.)	Capacity (ac.-ft.)
Price Drainage				
Fairview Lake	Cottonwood and Gooseberry Irrigation Co.	1869	33	1,949
Grassy Trail	East Carbon City	1952	89	916
Scofield*	Bureau of Reclamation	1946	125	73,600
San Rafael Drainage				
Cleveland	Huntington-Cleveland Irrigation Co.	1985	61	5,340
Electric Lake	Utah Power	1973	229	31,500
Ferron Debris Basin No. 5	Ferron Canal and Reservoir Co.	1970	35	109
Huntington	Huntington-Cleveland Irrigation Co.	1991	55	5,616
Huntington North*	Bureau of Reclamation	1966	74	5,420
Joes Valley*	Bureau of Reclamation	1966	192	62,400
Miller Flat	Huntington-Cleveland Irrigation Co.	1949	73	5,560
Millsite	Ferron Canal and Reservoir Co.	1971	115	18,000
Rolfson	Huntington-Cleveland Irrigation Co.	1953	36	600
Dirty Devil Drainage				
Forsyth	Fremont Irrigation Co.	1986	71	3,639
Johnson	Fremont Irrigation Co.	1966	31	10,350
Mill Meadow	Fremont Irrigation Co.	1954	115	5,232
Oak Creek (*aka* Upper Bowns)	Sandy Ranch	1982	45	915
Escalante Drainage				
Wide Hollow	New Escalante Irrigation Co.	1954	50	2,324

*Federal dams inspected and maintained by the Bureau of Reclamation.

operations, and excess water is pumped to points of discharge at mine portals. This interception of groundwater may alter natural flow patterns, and existing seeps and springs may be impacted. New mining techniques using long wall equipment result in massive caving following extraction of the coal seam. This method of mining causes subsidence cracks that sometimes reach the ground surface. Concerns have been expressed by local water user groups that subsidence has further resulted in the diminution or loss of seeps and springs.

The Coal Regulatory Program Rules, also commonly referred to as "the Water Replacement Rules," adopted by the Utah Board of Oil, Gas and Mining on March 15, 1998, provide a substantial basis for the protection of water rights and water quality. These new rules require any state-appropriated water that is diminished in quality or quantity or which is lost due to mining activities will be replaced. Several state agencies administer the numerous regulations associated with mining. The Division of Environmental Quality (DEQ) regulates the point and quality of mine discharge water. The Division of Oil, Gas and Mining (DOGM) regulates the hydrological effects of mining and administers the water replacement rules. The Division of Water Rights (DWRi) regulates the distribution of all appropriated surface water and underground water within the state. The responsibilities of these three agencies, however, overlap and sometimes conflict. The interception, collection and discharge of water by and from coal mines in Emery County is substantial. In excess of 5,000 acre-feet per year are discharged from the coal mines. Discharge of this water may be to drainages other than those from which the water originated or into which it previously flowed. Great care should be taken to ensure that the water rights of individuals and entities within the drainage basins affected by the coal mining activities are not jeopardized or diminished.

Until recently, the actual effects of subsidence have not been monitored. However, concerns over subsidence-related issues have promoted local water user groups, including the Emery Water Conservancy District and the Castle Valley Special Service District, to monitor the flow from various springs, creeks and rivers in Emery County.

As water is encountered by the mine operators, a report thereof should be made to DOGM which should then investigate the interception in greater detail and report its findings to the Division of Water Rights and to water users which may be potentially affected. A written agreement should then be developed to protect affected water rights and to further protect and enhance the quality of that water. In addition to the Water Replacement Rules, plans should be implemented prior to DOGM's issuance of any mining permit that will more fully address ways to avoid or minimize the impact of subsidence damage as it relates to the diminution and loss of groundwater and water quality.

Recommendations - There is a need for better correlation and development of definitive boundaries of authority between the three state agencies (DEQ, DOGM and DWRi) to avoid confusion and frustration to the mining industry and the various water users. Cooperation between DOGM, mining companies and local entities should be required to avoid duplication of efforts and to provide a means by which data can be shared between the state and local entities, water users and the coal mine operators for the protection of water resources. ●